

From: [Shephard, Burt](#)
To: [Anderson-Carnahan, Linda](#); [Bachman, Brenda](#)
Subject: RE: Statistical analyses of Discovery Bay toxicity test data
Date: Friday, June 30, 2017 12:16:48 PM

Iowa State has one of the best statistics departments in the country. Graduate degree requirements for the Animal Ecology department meant everyone had the equivalent of a minor in statistics. I'm not a card carrying statistician, but Lon and I are reasonably proficient in the more common stats questions that arise around here. Anytime we get asked about technical needs to fill in OERA or REU, my first request is always a statistician.

Best regards,

Burt Shephard
Risk Evaluation Unit
Office of Environmental Review and Assessment (OERA-095)
U.S. Environmental Protection Agency, Region 10
1200 6th Avenue
Seattle, WA 98101

Telephone: (206) 553-6359

Fax: (206) 553-0119

e-mail: Shephard.Burt@epa.gov

"Facts are stubborn things, but statistics are more pliable"

- Mark Twain

From: Anderson-Carnahan, Linda
Sent: Wednesday, June 28, 2017 2:56 PM
To: Shephard, Burt ; Bachman, Brenda
Subject: RE: Statistical analyses of Discovery Bay toxicity test data
Wow! You're a statistician!! I'm impressed (and going to remember this next time I have a question :)
You know we often have a need for statistical advice.....
[Linda Anderson-Carnahan](#), Associate Director
Office of Environmental Review and Assessment
US EPA Region 10, OERA-140, Suite 900
1200 Sixth Ave, Seattle, Wa. 98101
phone: (206) 553-2601
cell: (206) 291-6879

From: Shephard, Burt
Sent: Wednesday, June 28, 2017 12:59 PM
To: Bachman, Brenda <bachman.brenda@epa.gov>
Cc: Anderson-Carnahan, Linda <Anderson-Carnahan.Linda@epa.gov>
Subject: Statistical analyses of Discovery Bay toxicity test data
Attached is a Word file describing the results of the analyses. No surprises, no statistically significant

differences in survival between controls, Port Discovery Seafarms and reference area (Kruskal-Wallis test, $P = 0.209$).

Tests for homogeneity of variances, normality and survival differences between the duplicate samples of each of the control, Port Discovery and reference area are also shown.

The attached is also up on the G:\ drive. I'm out of the office the rest of the afternoon, at SCCA.

Best regards,

Burt Shephard
Risk Evaluation Unit
Office of Environmental Review and Assessment (OERA-095)
U.S. Environmental Protection Agency, Region 10
1200 6th Avenue
Seattle, WA 98101

Telephone: (206) 553-6359

Fax: (206) 553-0119

e-mail: Shephard.Burt@epa.gov

"Facts are stubborn things, but statistics are more pliable"

- Mark Twain